

WHAT IS CLAIMED IS:

1. A layout structure for a liquid crystal display, comprising a plurality of units, each of the units comprising:

a first data line and a second data line, both of which being arranged

5 substantially in parallel;

a first scan line, a second scan line, and a third scan line, all of which being arranged substantially in parallel and arranged in a matrix pattern together with the first data line and the second data line;

a first pixel comprising:

10 a first sub-pixel coupled to the first data line and the first scan line;

a second sub-pixel coupled to the second data line and the first scan line; and

a third sub-pixel coupled to the second data line and the second scan line; and

15 a second pixel comprising:

a fourth sub-pixel coupled to the first data line and the second scan

line;

a fifth sub-pixel coupled to the first data line and the third scan line;

and

a sixth sub-pixel coupled to the second data line and the third scan

5 line, wherein:

when the first scan line is enabled, data on the first data line is input to the first sub-pixel and data on the second data line is input to the second sub-pixel;

10 when the second scan line is enabled, data on the second data line is input to the third sub-pixel and data on the first data line is input to the fourth sub-pixel; and

when the third scan line is enabled, data on the first data line is input to the fifth sub-pixel and data on the second data line is input to the sixth sub-pixel.

- 15 2. The layout structure according to claim 1, wherein the liquid crystal display is formed by repeatedly arranging the unit in a matrix pattern.
3. A layout structure for a liquid crystal display, comprising a plurality of

units, each of the units comprising:

a first data line, a second data line, a third data line, and a fourth data line, all of which being arranged substantially in parallel with each other;

5 a first scan line, a second scan line, and a third scan line, all of which being arranged substantially in parallel with each other and arranged in a matrix pattern together with the first data line, the second data line, the third data line, and the fourth data line;

a first pixel comprising:

a first sub-pixel coupled to the first data line and the first scan line;

10 a second sub-pixel coupled to the second data line and the first scan line; and

a third sub-pixel coupled to the second data line and the second scan line;

a second pixel comprising:

15 a fourth sub-pixel coupled to the first data line and the second scan line;

a fifth sub-pixel coupled to the first data line and the third scan line;

and

a sixth sub-pixel coupled to the second data line and the third scan

line;

5 a third pixel comprising:

a seventh sub-pixel coupled to the third data line and the second scan

line;

an eighth sub-pixel coupled to the third data line and the first scan line;

and

10 a ninth sub-pixel coupled to the fourth data line and the first scan line;

and

a fourth pixel comprising:

a tenth sub-pixel coupled to the third data line and the third scan line;

an eleventh sub-pixel coupled to the fourth data line and the third scan

15 line; and

a twelfth sub-pixel coupled to the fourth data line and the second scan

line, wherein:

when the first scan line is enabled, data on the first data line is input to the first sub-pixel, data on the second data line is input to the second sub-pixel, data on the third data line is input to the eighth sub-pixel, and data on the fourth
5 data line is input to the ninth sub-pixel;

when the second scan line is enabled, data on the second data line is input to the third sub-pixel, data on the first data line is input to the fourth sub-pixel, data on the third data line is input to the seventh sub-pixel, and data on the fourth data line is input to the twelfth sub-pixel; and

10 when the third scan line is enabled, data on the first data line is input to the fifth sub-pixel, data on the second data line is input to the sixth sub-pixel, data on the third data line is input to the tenth sub-pixel, and data on the fourth data line is input to the eleventh sub-pixel.

4. The layout structure according to claim 3, wherein the liquid crystal
15 display is formed by repeatedly arranging the unit in a matrix pattern.

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